Name of Work: Estimate for the Work of Providing and laying of 400mm/500 mm dia RCC NP3 Class Sewerage pipeline from Manjunatha Kalyana Mantapa To M.S.Ramaiah North City gate along Strom Water Drain (SWD) Coming under Ward no.6- Thanisandra of Byatarayanapura Constituency

Sl No	Description of Work	MH		Unit	No	Length	Width	Depth	Quantity	Rate	Amount
		From	To								
1	EXCAVATION FOR PIPE LINE TRENCHES OF REQUIRED WIDTH by mechanical / & manual means including dressing sides, ramming of bottoms, providing barricading, danger lighting, shoring, strutting, dewatering, etc. IN ALL KINDS OF SOIL MIXED WITH BOULDERS of 30 cms size, etc. for: Pipes of all dia. for depth upto 2.0 M in all types of soils Note : If any shoring and strutting, will be paid separately (BWSSB SR 17-18 No: 1.1 Code:A050A) Page 51										
		MH 1	MH 2	m	1	30	1	2	60.0		
		MH 2	MH 3	m	1	30	1	2	60.0		
		MH 3	MH 4	m	1	30	1	2	60.0		
		MH 4	MH 5	m	1	30	1	2	60.0		
		MH 5	MH 6	m	1	30	1	2	60.0		
		MH 6	MH 7	m	1	30	1	2	60.0		
		MH 7	MH 8	m	1	30	1	2	60.0		
		MH 8	MH 9	m	1	30	1	2	60.0		
		MH 9	MH 10	m	1	30	1	2	60.0		
		MH 10	MH 11	m	1	30	1	2	60.0		
		MH 11	MH 12	m	1	30	1	2	60.0		
		MH 12	MH 13	m	1	30	1	2	60.0		
		MH 13	MH 14	m	1	30	1	2	60.0		
		MH 14	MH 15	m	1	30	1	2	60.0		
		MH 15	MH 16	m	1	30	1	2	60.0		
		MH 16	MH 17	m	1	30	1	2	60.0		
		MH 17	MH 18	m	1	30	1	2	60.0		
		MH 18	MH 19	m	1	30	1	2	60.0		
		MH 19	MH 20	m	1	30	1	2	60.0		
		MH 20	MH 21	m	1	30	1	2	60.0		
		MH 21	MH 22	m	1	30	1	2	60.0		
		MH 22	MH 23	m	1	35	1	2	70.0		
		MH 23	MH 24	m	1	35	1	2	70.0		
		MH 24	MH 25	m	1	32	1	2	64.0		
		MH 25	MH 26	m	1	30.5	1	2	61.0		
		MH 26	MH 27	m	1	30	1	2	60.0		
		MH 27	MH 28	m	1	35	1	2	70.0		
		MH 28	MH 29	m	1	35	1	2	70.0		
		MH 29	MH 30	m	1	35	1	2	70.0		
		MH 30	MH 31	m	1	35	1	2	70.0		
		MH 31	MH 32	m	1	35	1	2	70.0		
		MH 32	MH 33	m	1	35	1	2	70.0		
		MH 33	MH 34	m	1	35	1	2	70.0		
		MH 34	MH 35	m	1	35	1	2	70.0		
		MH 35	MH 36	m	1	35	1	2	70.0		
		MH 36	MH 37	m	1	35	1	2	70.0		
		MH 37	MH 38	m	1	35	1	2	70.0		
		MH 38	MH 39	m	1	35	1	2	70.0		
		MH 39	MH 40	m	1	35	1	2	70.0		
		MH 40	MH 41	m	1	35	1	2	70.0		
		MH 41	MH 42	m	1	35	1	2	70.0		
		MH 42	O/F-1	m	1	35	1	2	70.0		
	Total				42	1352.50			2705.00	167.0	451735.00
2	Pipes of all dia. for depth 2.0 to 4.0 M in all types of soils Note : If any shoring and strutting, will be paid separately (BWSSB SR 17-18 No.1.2 Code:A050B) Page										
		MH 1	MH 2	m	1	30	1.1	1	33.0		
		MH 2	MH 3	m	1	30	1	1	30.0		
		MH 3	MH 4	m	1	30	1	1	30.0		
		MH 4	MH 5	m	1	30	1	1	30.0		

		MH 5	MH 6	m	1	30	1	1	30.0		
		MH 6	MH 7	m	1	30	1	1	30.0		
		MH 7	MH 8	m	1	30	1	1	30.0		
		MH 8	MH 9	m	1	30	1	1	30.0		
		MH 9	MH 10	m	1	30	1	1	30.0		
		MH 10	MH 11	m	1	30	1	1	30.0		
		MH 11	MH 12	m	1	30	1	1	30.0		
		MH 12	MH 13	m	1	30	1	1	30.0		
		MH 13	MH 14	m	1	30	1	1	30.0		
		MH 14	MH 15	m	1	30	1	1	30.0		
		MH 15	MH 16	m	1	30	1	1	30.0		
		MH 16	MH 17	m	1	30	1	1	30.0		
		MH 17	MH 18	m	1	30	1	1	30.0		
		MH 18	MH 19	m	1	30	1	1	30.0		
		MH 19	MH 20	m	1	30	1	1	30.0		
		MH 20	MH 21	m	1	30	1	1	30.0		
		MH 21	MH 22	m	1	30	1	1	30.0		
		MH 22	MH 23	m	1	35	1	1	35.0		
		MH 23	MH 24	m	1	35	1	1	35.0		
		MH 24	MH 25	m	1	32	1	1	32.0		
		MH 25	MH 26	m	1	30.5	1	1	30.5		
		MH 26	MH 27	m	1	30	1	1	30.0		
		MH 27	MH 28	m	1	35	1	1	35.0		
		MH 28	MH 29	m	1	35	1	1	35.0		
		MH 29	MH 30	m	1	35	1	1	35.0		
		MH 30	MH 31	m	1	35	1	0.8	28.0		
		MH 31	MH 32	m	1	35	1	0.8	28.0		
		MH 32	MH 33	m	1	35	1	0.8	28.0		
		MH 33	MH 34	m	1	35	1.1	0.8	30.8		
		MH 34	MH 35	m	1	35	1.1	0.8	30.8		
		MH 35	MH 36	m	1	35	1.1	0.8	30.8		
		MH 36	MH 37	m	1	35	1.1	0.8	30.8		
		MH 37	MH 38	m	1	35	1.1	0.8	30.8		
		MH 38	MH 39	m	1	35	1.1	0.8	30.8		
		MH 39	MH 40	m	1	35	1.1	0.8	30.8		
		MH 40	MH 41	m	1	35	1.1	0.8	30.8		
		MH 41	MH 42	m	1	35	1.1	0.8	30.8		
		MH 42	O/F-1	m	1	35	1.1	0.58	22.3		
	Total								1284.03	225.00	288906.75
3	Extra Charges For excavation in all classifications in watery situations or foul conditions may be paid duly Obtaining approval from the Chief Engineer as under Towards DEWATERING with recuperation upto Two meter depth and thereof for: Excavated Depth 2m (BWSSB SR 17-18 no 15.1 Code:A100A)Page 56	CUM									
		MH 1	MH 2	m	1	30	1	2	60.0		
		MH 2	MH 3	m	1	30	1	2	60.0		
		MH 3	MH 4	m	1	30	1	2	60.0		
		MH 4	MH 5	m	1	30	1	2	60.0		
		MH 5	MH 6	m	1	30	1	2	60.0		
		MH 6	MH 7	m	1	30	1	2	60.0		
		MH 7	MH 8	m	1	30	1	2	60.0		
		MH 8	MH 9	m	1	30	1	2	60.0		
		MH 9	MH 10	m	1	30	1	2	60.0		
		MH 10	MH 11	m	1	30	1	2	60.0		
		MH 11	MH 12	m	1	30	1	2	60.0		
		MH 12	MH 13	m	1	30	1	2	60.0		
		MH 13	MH 14	m	1	30	1	2	60.0		
		MH 14	MH 15	m	1	30	1	2	60.0		
		MH 15	MH 16	m	1	30	1	2	60.0		
		MH 16	MH 17	m	1	30	1	2	60.0		
		MH 17	MH 18	m	1	30	1	2	60.0		
		MH 18	MH 19	m	1	30	1	2	60.0		
		MH 19	MH 20	m	1	30	1	2	60.0		
		MH 20	MH 21	m	1	30	1	2	60.0		
		MH 21	MH 22	m	1	30	1	2	60.0		
		MH 22	MH 23	m	1	35	1	2	70.0		
		MH 23	MH 24	m	1	35	1	2	70.0		
		MH 24	MH 25	m	1	32	1	2	64.0		
		MH 25	MH 26	m	1	30.5	1	2	61.0		
		MH 26	MH 27	m	1	30	1	2	60.0		
		MH 27	MH 28	m	1	35	1	2	70.0		
		MH 28	MH 29	m	1	35	1	2	70.0		
		MH 29	MH 30	m	1	35	1	2	70.0		
		MH 30	MH 31	m	1	35	1	2	70.0		

		MH 31	MH 32	m	1	35	1	2	70.0		
		MH 32	MH 33	m	1	35	1	2	70.0		
		MH 33	MH 34	m	1	35	1	2	70.0		
		MH 34	MH 35	m	1	35	1	2	70.0		
		MH 35	MH 36	m	1	35	1	2	70.0		
		MH 36	MH 37	m	1	35	1	2	70.0		
		MH 37	MH 38	m	1	35	1	2	70.0		
		MH 38	MH 39	m	1	35	1	2	70.0		
		MH 39	MH 40	m	1	35	1	2	70.0		
		MH 40	MH 41	m	1	35	1	2	70.0		
		MH 41	MH 42	m	1	35	1	2	70.0		
		MH 42	O/F-1	m	1	35	1	1.83	64.1		
	Total				42	1352.5			2699.05	61	164642.05
4	Excavated Depth 2 to 4 M (BWSSB SR 17-18 no 15.2 Code:A100B)Page 56	Cum									
		MH 1	MH 2	m	1	30	1.1	1	33.0		
		MH 2	MH 3	m	1	30	1	1	30.0		
		MH 3	MH 4	m	1	30	1	1	30.0		
		MH 4	MH 5	m	1	30	1	1	30.0		
		MH 5	MH 6	m	1	30	1	1	30.0		
		MH 6	MH 7	m	1	30	1	1	30.0		
		MH 7	MH 8	m	1	30	1	1	30.0		
		MH 8	MH 9	m	1	30	1	1	30.0		
		MH 9	MH 10	m	1	30	1	1	30.0		
		MH 10	MH 11	m	1	30	1	1	30.0		
		MH 11	MH 12	m	1	30	1	1	30.0		
		MH 12	MH 13	m	1	30	1	1	30.0		
		MH 13	MH 14	m	1	30	1	1	30.0		
		MH 14	MH 15	m	1	30	1	1	30.0		
		MH 15	MH 16	m	1	30	1	1	30.0		
		MH 16	MH 17	m	1	30	1	1	30.0		
		MH 17	MH 18	m	1	30	1	1	30.0		
		MH 18	MH 19	m	1	30	1	1	30.0		
		MH 19	MH 20	m	1	30	1	1	30.0		
		MH 20	MH 21	m	1	30	1	1	30.0		
		MH 21	MH 22	m	1	30	1	1	30.0		
		MH 22	MH 23	m	1	35	1	1	35.0		
		MH 23	MH 24	m	1	35	1	1	35.0		
		MH 24	MH 25	m	1	32	1	1	32.0		
		MH 25	MH 26	m	1	30.5	1	1	30.5		
		MH 26	MH 27	m	1	30	1	1	30.0		
		MH 27	MH 28	m	1	35	1	1	35.0		
		MH 28	MH 29	m	1	35	1	1	35.0		
		MH 29	MH 30	m	1	35	1	1	35.0		
		MH 30	MH 31	m	1	35	1	0.8	28.0		
		MH 31	MH 32	m	1	35	1	0.8	28.0		
		MH 32	MH 33	m	1	35	1	0.8	28.0		
		MH 33	MH 34	m	1	35	1.1	0.8	30.8		
		MH 34	MH 35	m	1	35	1.1	0.8	30.8		
		MH 35	MH 36	m	1	35	1.1	0.8	30.8		
		MH 36	MH 37	m	1	35	1.1	0.8	30.8		
		MH 37	MH 38	m	1	35	1.1	0.8	30.8		
		MH 38	MH 39	m	1	35	1.1	0.8	30.8		
		MH 39	MH 40	m	1	35	1.1	0.8	30.8		
		MH 40	MH 41	m	1	35	1.1	0.8	30.8		
		MH 41	MH 42	m	1	35	1.1	0.8	30.8		
		MH 42	O/F-1	m	1	35	1.1	0.58	22.3		
					42	1352.5			1284.03	91.00	116846.73
5	Excavation of Hard Rock/RCC by diamond Rope Cutting Method.Using Machinery like generator(Electric)Hitachi (Hydralic Excavator)breaker,Compressor and diamond rope with MS Rods etc,Complete as per Specification and directions of the Engineer in Charge. (BWSSB SR 17-18 No.24 Code:A120D)Page 57			Cum	1	220.00	1.50	0.40	90.00	5256.00	473040.00
6	REFILLING OF EARTH around pipelines, in Note: In exceptional cases, earth may be (BWSSB SR 17-18 No. 14.1 Code:A095A) Page			Cum							
	Total E.W.E 0-2 mtr depth								2,705.00		
	Total E.W.E 2-4 mtr depth								1284.03		
	Total E.W.E [A]								3,989.03		
	Deductions						Area				
	Pipe Volume	0.785	0.8	0.8	1	1,287.00	0.5				
	Manhole Volume, PCC	0.785	2.49	2.49	44		4.87	0.25	53.54		

	Manhole Volume = 3.142 x 1.5 x 1.5 x .25 x 3.2 x	0.785	2.2	1.2	1.7	45	2.27	2.22	226.3		
	Bedding using Approved stone dust								451		
	Providing Wet Mix Macadam								451		
	Total Deductions [B]								1,181.84		
	Refilling qty [C] = [A]- [B]			Cum					2,807.19	103	289140.57
7	Supplying S&S RCC SPUN / VIBRATED (REINFORCED) pipes NP-3 Class conforming RCC NP3 Class pipe of 400 mm dia. (BWSSB SR 17-18 No: 5.7 Code:T050G) Page				RMT	C/C length					
	a.RCC NP3 Class pipe of 400 mm dia.										
	(BWSSB SR 17-18 NO:5.4 Code:T050D)Page 158	MH 1	MH 2		1	30			30.0		
		MH 2	MH 3		1	30			30.0		
		MH 3	MH 4		1	30			30.0		
		MH 4	MH 5		1	30			30.0		
		MH 5	MH 6		1	30			30.0		
		MH 6	MH 7		1	30			30.0		
		MH 7	MH 8		1	30			30.0		
		MH 8	MH 9		1	30			30.0		
		MH 9	MH 10		1	30			30.0		
		MH 10	MH 11		1	30			30.0		
		MH 11	MH 12		1	30			30.0		
		MH 12	MH 13		1	30			30.0		
		MH 13	MH 14		1	30			30.0		
		MH 14	MH 15		1	30			30.0		
		MH 15	MH 16		1	30			30.0		
		MH 16	MH 17		1	30			30.0		
		MH 17	MH 18		1	30			30.0		
		MH 18	MH 19		1	30			30.0		
		MH 19	MH 20		1	30			30.0		
		MH 20	MH 21		1	30			30.0		
		MH 21	MH 22		1	15.8			15.8		
	TOTAL				21	615.80			615.80	1953.00	1202657.40
8	Supplying S&S RCC SPUN / VIBRATED CAST PIPES (REINFORCED) pipes NP-3 Class conforming to IS :458-1988 with latest amendments using ordinary portland cement, for sanitary works and conveying to work site, rolling and lowering into trenches, laying true to line and level including loading and unloading at both destinations and jointing of pipes and specials including cost of specials, perfect linking of joints with jack to correct position including cost of jointing materials, i.e, rubber rings conforming to IS: 5382 for S&S RCC pipes, with all leads and lifts as directed and giving necessary hydraulic test as per ISS to the required pressure and commissioning etc. complete. (Contractor will make his own arrangements for procuring water for testing). Before the execution of the work, the contractor shall carry out the survey and will be paid extra										
	RCC NP3 Class pipe of 500 mm dia.										
	(BWSSB SR 17-18 No: 5.7 Code:T050G) Page 159										
		MH 23	MH 24	m	1	35			35.0		
		MH 24	MH 25	m	1	32			32.0		
		MH 25	MH 26	m	1	30.5			30.5		
		MH 26	MH 27	m	1	30			30.0		
		MH 27	MH 28	m	1	35			35.0		
		MH 28	MH 29	m	1	35			35.0		
		MH 29	MH 30	m	1	35			35.0		
		MH 30	MH 31	m	1	35			35.0		
		MH 31	MH 32	m	1	35			35.0		
		MH 32	MH 33	m	1	35			35.0		
		MH 33	MH 34	m	1	35			35.0		
		MH 34	MH 35	m	1	35			35.0		
		MH 35	MH 36	m	1	35			35.0		
		MH 36	MH 37	m	1	35			35.0		
		MH 37	MH 38	m	1	35			35.0		
		MH 38	MH 39	m	1	35			35.0		
		MH 39	MH 40	m	1	35			35.0		
		MH 40	MH 41	m	1	35			35.0		
		MH 41	MH 42	m	1	35			35.0		
		MH 42	O/F-1	m	1	35			35.0		
	TOTAL								611.20		
	MAN HOLE DEDUCTION				-42	1.2			-50.40		
									560.80	2415.00	1354332.00
9	Constructing Pre-Cast RCC Manholes 1.2 m internal dia.,,1.0m depth & SFRC Cover & Frame			No	5.00				5.00	30960.00	154800.00

	(BWSSB SR 17-18 No.106.1 Code:T330A)Page 171										
10	Depth Above 1m and below 2m (47373 - 30960)=16413/-			M	4.25				4.25	16413.00	69755.25
11	Constructing Pre-Cast RCC Manholes 1.2 m internal dia… 2.0 M Depth & SFRC cover & Frame (BWSSB SR 17-18 No.106.5 Code:T330k)Page 171			No	30				30.00	47373.00	1421190
12	Depth Above 2m and below 3m (63888 - 47373)=16515/-			M	19.50				19.5	16515	322042.5
13	Constructing Pre-Cast RCC Manholes 1.2 m internal dia… 3.0 M Depth & SFRC cover & Frame			NO	7				7.00	63888.00	447216.00
14	Conducting the level and strip of SURVEY of alignment of Main sewers of required diameter including all data required for generating GIS map of sewer network, preparation and submission of plan and LS with ground level at 30 M intervals and junction points along the centre line of the alignment etc. showing the right of way, any permanent features, culverts, branch sewer pipe etc. complete as per specifications and as directed by the Engineer in charge with all leadand lifts etc. complete for:: Sewer pipes above 300 mm dia. (BWSSB SR 17-18 No. 123.20 Code:T475B) Page 182			RMT							
		MH 1	MH 2	rmt	1	30					
		MH 2	MH 3	rmt	1	30					
		MH 3	MH 4	rmt	1	30					
		MH 4	MH 5	rmt	1	30					
		MH 5	MH 6	rmt	1	30					
		MH 6	MH 7	rmt	1	30					
		MH 7	MH 8	rmt	1	30					
		MH 8	MH 9	rmt	1	30					
		MH 9	MH 10	rmt	1	30					
		MH 10	MH 11	rmt	1	30					
		MH 11	MH 12	rmt	1	30					
		MH 12	MH 13	rmt	1	30					
		MH 13	MH 14	rmt	1	30					
		MH 14	MH 15	rmt	1	30					
		MH 15	MH 16	rmt	1	30					
		MH 16	MH 17	rmt	1	30					
		MH 17	MH 18	rmt	1	30					
		MH 18	MH 19	rmt	1	30					
		MH 19	MH 20	rmt	1	30					
		MH 20	MH 21	rmt	1	30					
		MH 21	MH 22	rmt	1	30					
		MH 22	MH 23	rmt	1	35					
		MH 23	MH 24	rmt	1	35					
		MH 24	MH 25	rmt	1	32					
		MH 25	MH 26	rmt	1	30.5					
		MH 26	MH 27	rmt	1	30					
		MH 27	MH 28	rmt	1	35					
		MH 28	MH 29	rmt	1	35					
		MH 29	MH 30	rmt	1	35					
		MH 30	MH 31	rmt	1	35					
		MH 31	MH 32	rmt	1	35					
		MH 32	MH 33	rmt	1	35					
		MH 33	MH 34	rmt	1	35					
		MH 34	MH 35	rmt	1	35					
		MH 35	MH 36	rmt	1	35					
		MH 36	MH 37	rmt	1	35					
		MH 37	MH 38	rmt	1	35					
		MH 38	MH 39	rmt	1	35					
		MH 39	MH 40	rmt	1	35					
		MH 40	MH 41	rmt	1	35					
		MH 41	MH 42	rmt	1	35					
		MH 42	O/F-1	rmt	1	35					
	TOTAL								1288.00	28.00	36064.00
15	HC Water pumpset (3500 Ltr / Hr) (BWSSB SR 17-18 Page No.6 EQP Code :2270)			Day	3	45			135.00	775.00	104625.00

16	Excavation for the ramming/jacking pits.The Work includes cutting of asphalt/concrete surface,excavation in all types of soil and strata, dewatering,disposal of debris,refilling the trenches with consadilation,restoration,of road surface to normal surface by concentring.asphalting etc.. complete..Size upto 5mts * 3mts- depth upto 4mts as per direction of the Engineer Incharge of the work with all lead and Lift,loading and unloading and allother incidental charges etc.. complete as per specification and direction of the engineer-in-charge of the work..			NOS					1.00	163930.00	163930.00
17	Installation of product pipe by manual jacking Method- Manufacturing providing,Transporting,rolling,lowering,laying and jointing,testing,commissioning of ERW(Electric Resistance Welded),SAW(Submerged Arc Welded)MS Pipe(Fe-410 grade)conforming to IS 3589-2001 with latest amendments including perfect linking welding joints to correct positions including cost and conveyance of pipes and materials with all lea.., loft,cost of labour ,loading and unloading of pipes for the following diameters with specified thickness of plate as noted below including bailing out of water wherever necessary for laying of MS carrier pipr of suitable dia including inside and outside of casing pipe painted with two coats of Anti corrossive tankmastik paint.Installation of			Rmt					30.00	28333.00	849990.00
	KPWD SR ITEMS										
18	KSRB 2.8 : Providing and filling in foundation with granite / trap broken metal 100 mm. and down size, with approved sand including hand [illegible] Bedding for pipeline per the direction of the Engineer Incharge of the work with all lead and lift. Loading and umloading and allother KPWD SR 18-19 Sl No:2.15 Page 7			Cum							
		MH 1	MH 2	cum	1	30	1	0.15	4.5		
		MH 2	MH 3	cum	1	30	1	0.15	4.5		
		MH 3	MH 4	cum	1	30	1	0.15	4.5		
		MH 4	MH 5	cum	1	30	1	0.15	4.5		
		MH 5	MH 6	cum	1	30	1	0.15	4.5		
		MH 6	MH 7	cum	1	30	1	0.15	4.5		
		MH 7	MH 8	cum	1	30	1	0.15	4.5		
		MH 8	MH 9	cum	1	30	1	0.15	4.5		
		MH 9	MH 10	cum	1	30	1	0.15	4.5		
		MH 10	MH 11	cum	1	30	1	0.15	4.5		
		MH 11	MH 12	cum	1	30	1	0.15	4.5		
		MH 12	MH 13	cum	1	30	1	0.15	4.5		
		MH 13	MH 14	cum	1	30	1	0.15	4.5		
		MH 14	MH 15	cum	1	30	1	0.15	4.5		
		MH 15	MH 16	cum	1	30	1	0.15	4.5		
		MH 16	MH 17	cum	1	30	1	0.15	4.5		
		MH 17	MH 18	cum	1	30	1	0.15	4.5		
		MH 18	MH 19	cum	1	30	1	0.15	4.5		
		MH 19	MH 20	cum	1	30	1	0.15	4.5		
		MH 20	MH 21	cum	1	30	1	0.15	4.5		
		MH 21	MH 22	cum	1	30	1	0.15	4.5		
		MH 22	MH 23	cum	1	35	1	0.15	5.3		
		MH 23	MH 24	cum	1	35	1	0.15	5.3		
		MH 24	MH 25	cum	1	32	1	0.15	4.8		
		MH 25	MH 26	cum	1	30.5	1	0.15	4.6		
		MH 26	MH 27	cum	1	30	1	0.15	4.5		
		MH 27	MH 28	cum	1	35	1	0.15	5.3		
		MH 28	MH 29	cum	1	35	1	0.15	5.3		
		MH 29	MH 30	cum	1	35	1	0.15	5.3		
		MH 30	MH 31	cum	1	35	1	0.15	5.3		
		MH 31	MH 32	cum	1	35	1	0.15	5.3		
		MH 32	MH 33	cum	1	35	1	0.15	5.3		
		MH 33	MH 34	cum	1	35	1	0.15	5.3		
		MH 34	MH 35	cum	1	35	1	0.15	5.3		
		MH 35	MH 36	cum	1	35	1	0.15	5.3		
		MH 36	MH 37	cum	1	35	1	0.15	5.3		

		MH 37	MH 38	cum	1	35	1	0.15	5.3		
		MH 38	MH 39	cum	1	35	1	0.15	5.3		
		MH 39	MH 40	cum	1	35	1	0.15	5.3		
		MH 40	MH 41	cum	1	35	1	0.15	5.3		
		MH 41	MH 42	cum	1	35	1	0.15	5.3		
		MH 42	O/F-1	cum	1	35	1	0.15	5.3		
	TOTAL								202.88	2574.74	522,350.38
19	Disposal off the excess exacated earth of all types vechile including loading,unloading with all lead and lifts,labour,HOM of machinaries etc.. For. Distance of 5 KM as per the direction of the enginner incharge of the work with all lead and lift,loading and unloading and all other incidental charges etc complete as per specifiaction and direction of the engineer in charge of the work.			Cum							
	pipe vol	0.785	0.8	0.8	1.00	1352	0.5		339.6224		
	man hole vol PPC	0.785	2.49	2.49	42		4.87	0.25	248.8780591		
	man hole		2.2	1.24					307.4		
	pcc bedding								286.21		
	wet mix										
	TOTAL			Cum					1,182.12	193.00	228149.16
20	Providing and laying in position reinforced cement concrete of design mix M20 with OPC Cement @320kgs with 20mm down size graded granite coarse aggregates @0.69 cum and fine aggregates@0.460 cum.withsuper plasticsres @ 3 liters conforming to IS9103-1999 Reaffirmed-2008,machine mixed.concrete laid in layers not exceeding 15 cms thick,vibrated for all works in foundation for footings ,pedastales,retaining walls(any thickness)including attached plasters,columns,piers,abutments,pillars,posts,struts,buttresses,bed blocks,plinths etc..including cost of all materials,labour,HOM Machinery,curing,complete.										
	encasement and restoration			cum	1	120	1	1	120		
				cum	1	120	1	1			
	deductions			cum	1	-120	0.65	0.3	-23.4		
	total								96.6	5998.54	579,458.96
21	Providing and Removing centring,shuttering,propping etc.. For columns pillars,post and str pillars,post, and structs,square/rectangular/polygon/in plan including cost of all materilas,labour complete as per specifications.Specification No KBS 4.6.2										
	TOTAL			Sqm	2	120		1.05	252.00	483.36	121806.72
22	Providing T.M.T steel reinforcement for R.C.C work including straighting,cutting,bending,hooking,placing in position,lapping and/or welding wherever required,tying with binding wire and anchoring to the adjoining membere wherever necessary complete as per design(laps,hooks and wasteage shall not be measured and paid)cost of material,labour,HOM Machinery complete as per specification.as per direction of the engineer incharge of the work with all lead and lift,loading and unloading all other incidential charges etc..complete as per specification and direction of the engineer-in-charge of the work.			Mt					2.00	75223.96	150,447.92

23	Diversion of water course by providing Coffer dams or bunds or island as may be necessary for piers and abutments foundations, bailing out or pumping water during excavation and until completion etc., complete. As per the			Cum					200.00	417.64	83,528.00
										Total	9,596,654.39
									Total Estimated Amount		9596654.39
24									BWSSB ETP Charges at 1%		95,966.54
25									Cost PMC/third Party Inspection LS		60,000.00
31									Advertisement Charges		40,000.00
									Miscellaneous and rounding off		7379.06
									Total		9,800,000.0

Certificate.

1 The workspot was inspected and work is found to be necessary.
2 The area comes within the Bruhat Bangalore Mahanagara Palike limits.
3 The rates adopted based on the BWSSB SR 2017-18 and KPWD SR 2018-19.
4 The provisions made in the estimate are necessary and essential.

Assistant Engineer

Assistant Executive Engineer

Executive Engineer

ADMINISTRATIVE APPROVAL

Accorded For Rs. 98.00 Lakhs.

Head of A/c. P-3111

Div. Ref. No. 78 Date 24/02/2019

AE 24/02

EE(BTP) 24/02

Technical Sanction
Accorded For Rs 98 Lakhs only
Head of A/C P-3111
CER NO : 260 Dt: 04.02.2019

TA

DE (YNK)